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The Transatlantic Capability Gap: A General Assessment

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October 2000

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IDA Document D-2512

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PREFACE

This document was prepared under the Institute for Defense Analyses Independent Research Program. It was reviewed by Dr. James Thomason.

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SUMMARY

The United States is the only country that possesses the broad spectrum of completely integrated military capabilities which allow it to bring the full weight of the U.S. military to bear anywhere in the world. From its space-based reconnaissance satellites to its global force projection to its subsurface warfare capabilities, U.S. "overmatch" is characterized by its ability to maintain a decisive strategic, tactical, and operational advantage over its adversaries and address the entire range of military contingencies, while minimizing the risk to its own forces. A major enabling factor of this ability for the U.S. has been its heavy investment in the Revolution of Military Affairs (RMA), which, according to Tom McKendree, is "a military technical revolution combining [technical advances in] surveillance, C3I [command control, communications and intelligence] and precision munitions [with new] operational concepts, including information warfare, continuous and rapid joint operations (faster than the adversary), and holding the entire theater at risk (i.e., no sanctuary for the enemy, even deep in his own battlespace)."¹

Not only does the U.S. excel in the specific capabilities mentioned above, but the U.S. military system is integrated to an extent not found in the military systems of the allies. Some European countries have very limited capabilities in a number of the above areas; others are equivalent to the U.S. on some technologies but lack the breadth of systems or system integration, doctrine, training, or research and development capabilities of the U.S. None of the European countries possesses the entire range or redundancy of ability the U.S. military currently has at its disposal (and continues to improve.) Thus the transatlantic capability gap can be described as the disparity between the ability of the U.S. and that of its European allies to field integrated military forces with decisive overmatch against adversaries' forces across the full spectrum of operations.

Britain, as America's closest ally, has attempted to follow the U.S. model closely in utilizing the developments in information systems and technologies that characterize the RMA. Through development and purchases of unmanned aerial vehicles, precision-

¹ Quoted in Richard O. Hundley, *Past Revolutions, Future Transformations: What Can the History of Revolutions in Military Affairs Tell Us About Transforming the U.S. Military?* (Santa Monica: RAND, 1999), p. 7.

guided munitions, communications systems, and airlift capability, Britain is investing its sparse defense resources in areas that will enhance its force projection capability. Whether sufficient resources are available to fully accomplish this program is open to question, however.

The French military continues to be constrained by a fixed budgetary ceiling based on its 5-year defense plan, which severely restricts its ability to develop and procure the military technologies necessary to increase the capabilities of French forces. Moreover, France continues to invest its limited resources in developing indigenous prestige systems, namely a new aircraft carrier and a robust nuclear force.

Germany faces a challenge in reconciling its defense goals with severe budget constraints and contentious political choices. While the German government intends to reduce the size of the armed forces and create a professional corps capable of rapid, interoperable, and joint deployments to "out-of-area" crises, the German defense budget does not appear to provide adequate resources for such a modernization. Indeed, Germany's attempt at harnessing RMA technologies will likely be sporadic, restricting the ability of Germany's military to shape a coherent, joint force. Cost savings will eventually be achieved by reducing the size of Germany's conscript force, but the failure to invest adequately in RMA technologies today will likely necessitate an even larger investment in the relevant technologies in the future.

Given the growing disparity in capabilities with its major NATO allies, the U.S. is encouraging the Europeans to concentrate on developing forces that are interoperable with those of the United States and to take advantage of the momentum generated by the U.S. efforts to incorporate the RMA into its doctrine. The Europeans, for their part, may yet demonstrate that their stated policies are not just empty rhetoric. It appears that Europe's civilian leaders now recognize the importance of closing the capability gap. The question is whether they have the political will to elevate their current investment in RMA technologies and impart a sense of urgency to their publics. Little is currently being done in this regard, and until European governments take such actions, the gap will almost surely continue to grow wider. Nevertheless, the U.S. continues to look for new opportunities, through NATO and the growing transatlantic marketplace, to work closely with the Europeans.

The bottom line is that since the U.S. must conduct military operations in an increasingly anarchic international environment, the more support it can garner from its allies in these operations, the better. If the U.S. chooses to continue its practice of

coalition operations, it faces the risk of further political alienation from its closest allies and coalition partners as a result of the visible disparity of capabilities displayed in such operations as Allied Force. Should the U.S. choose (or be forced in view of the capability gap) to operate unilaterally, it may face strong criticism from the international community for such action. Both possibilities could prove dangerous to overall U.S. national interests. Thus a way to bridge the capability gap is needed. This approach must ensure that coalition forces are both effective and balanced in terms of the contributions and capabilities that are brought to the table by all members of the coalition.

In light of this discussion, we may define "bridging the capability gap" as:

Implementing a program of investments in training, doctrinal development, technology, and military systems that will lead to a total capability among the U.S. and our allies and coalition partners to respond to the full spectrum of international crises in a way that avoids or mitigates against intra-alliance political problems of the sort experienced during and after Operation Allied Force.

Bridging the capability gap is not something that can be done unilaterally by the U.S. or any of our European Allies—it must be done in concert. It will be the all-important job of U.S. diplomacy to convey carefully the importance of undertaking such a program to our European allies while respecting their national idiosyncrasies.

This paper explores the dimensions of the capability gap (with particular attention to the situation with the UK, France, and Germany) and lays out a small number of policy issues that bear upon the question of how best to structure and implement such a program to bridge the gap. It is hoped that this background information and these questions will be useful in stimulating further debate leading to a constructive approach to dealing with this important issue.

THE TRANSATLANTIC CAPABILITY GAP: A GENERAL ASSESSMENT

At the height of the Berlin Wall Crisis in July 1961, President John F. Kennedy observed at a press conference that "Napoleon once said that he won all his successes because he fought allies." Indeed, such pronouncements expressing the difficult political realities of the NATO alliance were typical of many western leaders on both sides of the Atlantic throughout the Cold War.

Since the demise of the Soviet Union, however, and the refocusing of U.S. and European military concerns away from a major war in Central Europe and increasingly toward far (and not so far) flung problem areas such as the Balkans, the Middle East, the Far East, and Africa, NATO Cold War nostalgia may have set in. Certainly, NATO has a legitimate claim as one of the more effective military alliances in history. Yet it seems that contemporary observers have forgotten the fact that, at several times throughout its history, many internal political challenges, usually based on technological innovations, arose within the Western Alliance. In the late 1950s and 1960s, for example, one of the questions most asked in the corridors of NATO was whether, with the development of intercontinental ballistic missiles (ICBMs), the U.S. would follow a "Fortress America" strategy and avoid risking one of its major cities in a nuclear retaliatory strike if the Soviets launched an attack, nuclear or otherwise, against a major city in Western Europe such as London, Paris, or Hamburg.

In any event, the NATO alliance worked through and overcame many difficult internal conflicts throughout the Cold War and survived—testament to the durability and political flexibility of its members. Evolutionary growing pains in NATO are nothing new. But in the late 1990s, a number of ideas, policies, circumstances and situations arose that radically altered the basic outlook and premise of the Alliance. With Russia no longer posing a military threat to Europe, NATO now faces a new challenge brought to the fore by Operation Allied Force in Kosovo in the spring of 1999—the so-called capability gap.

The United States is the only country that possesses the broad spectrum of completely integrated military capabilities which allow it to bring the full weight of the U.S. military to bear anywhere in the world. From its space-based reconnaissance

satellites to its global force projection to its subsurface warfare capabilities, U.S. "overmatch" is characterized by its ability to maintain a decisive strategic, tactical, and operational advantage over its adversaries and address the entire range of military contingencies, while minimizing the risk to its own forces. A major enabling factor of this ability for the U.S. has been its heavy investment in the Revolution of Military Affairs (RMA), which, according to Tom McKendree, is "a military technical revolution combining [technical advances in] surveillance, C3I [command control, communications and intelligence] and precision munitions [with new] operational concepts, including information warfare, continuous and rapid joint operations (faster than the adversary), and holding the entire theater at risk (i.e., no sanctuary for the enemy, even deep in his own battlespace)."²

Not only does the U.S. excel in the specific capabilities mentioned above, but the U.S. military system is integrated to an extent not found in the military systems of the allies. Some European countries have very limited capabilities in a number of the above areas; others are equivalent to the U.S. on some technologies but lack the breadth of systems or system integration, doctrine, training, or research and development capabilities of the United States. None of the European countries possess the entire range or redundancy of ability the U.S. military currently has at its disposal (and continues to improve.) Thus the transatlantic capability gap can be described as the disparity between the ability of the U.S. and that of its European allies to field integrated military forces with decisive overmatch against adversaries' forces across the full spectrum of operations.

This paper will examine the transatlantic capability gap in a broad geopolitical sense by (1) outlining the current U.S. military capability and its investment in a technologically superior, fully integrated force; (2) highlighting the major European policies aimed at overcoming the capability gap; and (3) describing the current transatlantic business conditions which could play a critical role in helping to "bridge the gap." In order to gain a better measure of the transatlantic capability gap, the paper discusses America's three foremost European/NATO allies—the United Kingdom, France, and Germany—highlighting the main policy issues within each of these countries, outlining where specific capability deficiencies currently exist, and describing the budgetary and policy trends of these countries. Finally, this paper projects the likely

² Quoted in Richard O. Hundley, *Past Revolutions, Future Transformations: What Can the History of Revolutions in Military Affairs Tell Us About Transforming the U.S. Military?* (Santa Monica: RAND, 1999), p. 7.

course of the transatlantic capability gap and poses several practical policy questions so as to examine how the capability gap may be overcome.

A. THE U.S. AND THE CURRENT TRANSATLANTIC CAPABILITY GAP—A BRIEF OVERVIEW

1. The United States Capability

Technological innovations since the Vietnam War have increasingly allowed the U.S. to lift the “fog of war.” From the late 1970s onward, with the exception of a decline during the mid-1990s, the United States has invested heavily in the research, development, and procurement of military systems that offer significant overmatch capabilities against potential opponents. In the late 1990s, when these military systems were realized, the Revolution in Military Affairs (RMA) became the principal catalyst for U.S. military concepts offering the possibility of revolutionary new joint command, control, communications and intelligence (C3I); long-range precision strike; and force projection capabilities that have significantly impacted U.S. strategic thinking. Several high-profile U.S. studies and initiatives, including Joint Vision 2010 (and Joint Vision 2020) and the 1997 Quadrennial Defense Review among others, recommended continued investment in information technologies by the Pentagon to ensure that the benefits of these systems would be available to more fully integrate U.S. forces, acquire complete battlespace awareness and dominance, and attain a highly effective precision strike capability. One such study, the December 1997 Report of the National Defense Panel, presciently noted that:

We are on the cusp of a military revolution stimulated by rapid advances in information and information-related technologies. This implies a growing potential to detect, identify, and track far greater numbers over a larger area for a longer time than ever before, and to provide this information much more quickly and effectively than heretofore possible. Those who can exploit these opportunities—and thereby dissipate the “fog of war”—stand to gain significant advantages.³

Suddenly, examining the implications of the RMA and devising implementation schemes for it became a cottage industry. Force XXI, the Army After Next (AAN), Battlefield Digitization, the Aerospace Expeditionary Force (AEF), and the Maritime Land Attack concepts are all now familiar “buzz words,” all contributing to the

³ *Transforming Defense: National Security in the 21st Century*, Report of the National Defense Panel, December 1997, p. iii.

rationalization of the RMA. With the focus now on fighting war after 2010, these are the first generation of concepts to put flesh to RMA requirements for a force where:

Automation and systems architectures capable of disseminating information to widely dispersed and dissimilar units and integrating their actions will be key. We will need greater mobility, precision, speed, stealth, and strike ranges while we sharply reduce our logistics footprint. All operations will increasingly be joint, combined and interagency.⁴

Recognizing that meeting these modernization requirements has a price, the U.S. government is devoting significant financial resources to its defense budget, specifically in the areas of research and development and procurement. For fiscal year (FY) 2001, the U.S. will spend a total of \$288 billion on defense, with \$59.2 billion being appropriated for procurement and \$39.6 billion for research and development. The Clinton administration has recently announced it is planning to boost the Pentagon's budget, possibly by as much as \$19 billion over the next 6 years. The 2001 Future Years Defense Plan (FYDP), which estimates the Department of Defense's (DoD) spending through 2005, shows a trend toward slightly increased defense expenditures. The 2001 FYDP for procurement expenditures are as follows.⁵

FY 2001 - \$59.2 billion (an additional \$2.8 billion in procurement funding for the purchase of 12 C-17s was placed in a separate airlift account)

FY 2002 - \$62.0 billion (estimated) FY 2004 - \$64.0 billion (estimated)

FY 2003 - \$64.4 billion (estimated) FY 2005 - \$65.8 billion (estimated)

The primary areas of U.S. RMA investment over the past three decades have included strategic lift, overhead intelligence capabilities, precision-guided munitions (PGMs), and secure, increasingly digital communications.

The U.S. maintains an enormous capability to deploy major combat elements by air and sea from the U.S. and from overseas U.S. military facilities to virtually any point in the world; to employ these forces directly and immediately across the full spectrum of potential peacekeeping and war fighting tasks; to provide comprehensive and redundant command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR) support; and to ensure uninterrupted sustainment of these forces. Several areas demonstrating U.S. overmatch capabilities follow.

⁴ Ibid.

⁵ GAO Report, *Future Years Defense Program: Comparison of Planned Funding Levels for the 2000 and 2001 Programs*, NSIAD-00-179, p. 2.

The overwhelming airlift and sealift assets of the United States include:

- 715 tactical (mainly C-130s) and 332 strategic (mainly C-5, C-17, and C-141) aircraft
- A program to procure a total of 134 C-17 strategic (i.e., transcontinental) airlifters by 2003
- Prepositioning of fully loaded cargo ships, surge capacity, and sustainment operations (Tactically, the U.S. can employ amphibious craft to carry out a range of combat or peacekeeping missions, while its NATO allies do not possess any significant amphibious capability above the brigade or regimental level.)

Moreover, the U.S. is increasingly utilizing a range of very accurate precision-guided munitions (PGMs). During the 1991 Gulf War, only 10% of all bombs dropped over Iraq were PGMs, whereas during Operation Allied Force, over 90% of all bombs dropped over Yugoslavia were PGM. PGMs give the U.S. an unmatched ability for destroying high value enemy targets with very low risks to U.S. forces and greatly reduced collateral damage. Examples of U.S. PGM capabilities are:

- Cruise missiles (Tomahawk)
- Laser-guided bombs (Paveway)
- GPS-guided glide-weapons and bombs (JSOW, JDAM)
- Infrared-guided missiles (SLAM-ER, Maverick)

Given the increased proclivity to minimize both civilian and friendly military casualties, the lack of PGM capability by U.S. allies severely hinders the ability of the U.S. to carry out fully integrated coalition operations. Table 1 outlines selected examples of the ongoing U.S. commitment to procure and maintain significant numbers of them in the future.

Table 1. U.S. Planned Procurement of PGMs

PGM	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
Tomahawk	148	176	70	149	200	342
AMRAAM	100	100	100	100	100	100
JSOW	615	636	748	775	785	584
SLAM-ER	56	38	38	38	38	38
STANDARD	91	112	147	206	252	269
RAM	100	100	155	180	230	205
ESSM	0	31	87	165	147	152
AIM-9X	75	125	300	300	300	300

Source: Briefing by H. Lee Buchanan, Assistant Secretary of the Navy (RDA), 'Procurement for the 21st Century,' at Navy Marine Corps CEO Conference V, October 12-14, 1999

The U.S. increasingly employs several systems to ensure secure communications through all levels of command. According the U.S. Department of Defense's After-Action Report on the Kosovo conflict, "The command, control, communications and computers (C4) systems provided for Operation Allied Force were unprecedented in terms of capacity and variety of services...The available bandwidth was nearly double that used during the Gulf War, an operation with far more forces committed."⁶ (By contrast, non-U.S. NATO countries have not developed adequate secure communications systems, as evidenced by published reports about nonsecure communications by European pilots during the Kosovo conflict).

Examples of U.S. programs to enhance secure communications capabilities include:

- Global Information Grid (GIG), the Department of Defense's envisioned globally interconnected end-to-end set of information capabilities designed to provide seamless, real-time information to the warfighter
- Joint Tactical Information Distribution System (JTIDS)/Multifunctional Information Distribution System (MIDS), LINK-16 program. JTIDS/MIDS provides high-capacity secure, jam-resistant digital data communication, multi-service, NATO interoperability, and situational awareness

The U.S. has also made the development and deployment of unmanned aerial vehicles (UAVs) and unmanned combat aerial vehicles (UCAVs) a priority. Nonlethal and lethal UAVs, such as the Pioneer, Hunter, Predator, and Global Hawk, have

⁶ DoD Report to Congress, *Kosovo/Operation Allied Force After Action Report*, January 31, 2000, p. 46.

numerous real-time capabilities: reconnaissance, surveillance, targeting, direct attack, and damage assessment. The Hunter and Predator were the only UAVs employed during the Kosovo conflict capable of transmitting near real-time imagery back to the Combined Air Operations Center and elsewhere, via DoD's Global Broadcast System. European UAVs did not possess this capability.

2. Europe and the Capability Gap

Operation Allied Force underlined more than any other multinational military engagement during or since the Cold War the enormous capability gap between the United States and its European allies. American forces carried out an overwhelming share of the missions during the campaign, providing over 70% of the aircraft, 80% of the munitions, and 150 of the 200 refueling aircraft.⁷ The European partners in Operation Allied Force generally found it difficult to transport their personnel and equipment to the theater of operations, and few possessed PGMs or PGM-capable aircraft. Moreover, they lacked all-weather target acquisition systems and a secure communications capability, deficits that impeded overall NATO operations. As the U.S. Department of Defense's After Action report on the Kosovo conflict noted, the combined NATO operation:

...highlighted a number of disparities between the U.S. capabilities and those of our allies, including precision strike, mobility, and command, control, and communications capabilities. The gaps were real, and they had the effect of impeding our ability to operate at optimal effectiveness with our NATO allies. For example, because few NATO allies could employ precision strike munitions in sufficient numbers (or at all), the United States conducted the preponderance of the strike sorties during the early stages of the conflict. Problems regarding communication interoperability persisted throughout the campaign. Insufficient air mobility assets among our allies slowed deployment of Kosovo ground forces. ...⁸

The RMA, which for several years had been a mantra of the Pentagon, paid dividends for U.S. forces during Operation Allied Force, given the political decision to absolutely minimize U.S./NATO and civilian casualties. Europe, meanwhile, was made acutely aware of its military malaise caused by the much reduced defense budgets among all the European nations since the end of the Cold War. The result was an increased emphasis in Europe on the European Defense Identity, which came to fruition in plans for

⁷ Paul Helminger, "Defence Budget Trends Within the Alliance," NATO Parliamentary Assembly Committee Report, April 12, 2000.

⁸ *Kosovo/Operation Allied Force After Action Report*, p. 25.

establishment of a Rapid Reaction Force of some 60,000 men under the auspices of the European Union. At the very minimum, Operation Allied Force demonstrated to NATO that all members of the Alliance would have to adapt their military capabilities to reflect the post-Cold War international security environment by making their forces more mobile, flexible, and, most of all, interoperable.

Indeed, there is a continuing disconnect between the defense budget priorities of the U.S. and its major European allies. The U.S. continues to spend a measurably greater percentage of its gross domestic product (GDP) for defense than its major European partners. In 1999, U.S. defense spending was 3.18% of its GDP, while that for France was 2.8%; the U.K., 2.57%; and Germany, 1.55%.⁹ While Britain's recently announced slight defense spending increase through 2004 should negate any continued decline in the spending/GDP ratio, France and Germany's spending/GDP ratio will continue to decline if budget projections remain true (see individual country sections below).

Concomitantly, Europe's (except for the U.K.) continued reliance on high-cost, conscription-based forces hinders its ability to adequately procure, integrate into the force structure, and sustain over time the essential elements required for a dependable overmatch capability compatible with U.S. systems. Important areas such as strategic lift, PGMs, secure communication, and UAVs appear to be neglected. As a general comparison, the U.K., France, and Germany spent a combined \$17.1 billion in procurement in 1999, while the U.S. spent \$47.1 billion. The U.S. also spent \$35.3 billion in R&D compared with a combined \$8.2 billion for the U.K., France, and Germany. Moreover, these countries spend a much greater share of their respective defense budgets on personnel costs than does the United States. Figure 1 depicts the composition of defense spending for the United Kingdom, Germany, France, and the United States in 1998 (the most recent year for which a complete breakdown of the budget numbers is available).¹⁰

⁹ William Cohen, "Report on Allied Contributions to the Common Defense 2000," *A Report to the U.S. Congress by the Secretary of Defense*, p. III-4.

¹⁰ *The Military Balance, 1999-2000* (London: Oxford University Press, 1999).

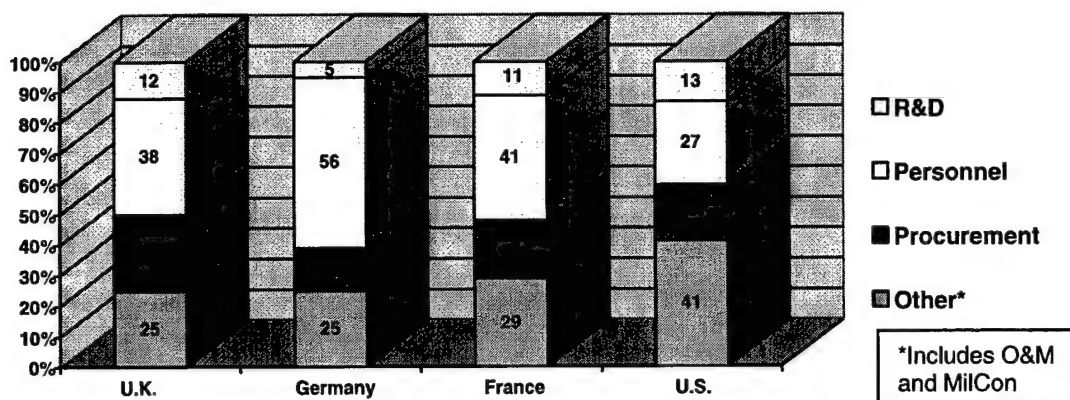


Figure 1. Composition of Defense Spending for 1998

Since the NATO operation in Kosovo, Great Britain and France, the two European nations that saw the most extensive involvement in the various Balkan crises in the 1990s and that had recognized their capability shortfall vis-à-vis the United States, have been at the forefront of outlining the military assets that would be required for a defense force centered in the European Union. In November 1999, British Prime Minister Tony Blair and French President Jacques Chirac publicly articulated their support for a European rapid reaction corps, with the stated aim of enhancing European military capabilities while avoiding wasteful duplication by the European Union member states. Recognizing some of the transatlantic political difficulties, they argued that the creation of a European rapid reaction force would allow Europe to act in situations where the United States or NATO as a whole may not wish to be involved. They specifically pointed out in their Joint Declaration the hope that the EU would:

- Set itself the goal of Member States, cooperating together, being able to deploy rapidly and then sustain combat forces that are militarily self-sufficient up to Corps level with the necessary command, control, and intelligence capabilities; logistics; combat support; and other combat service support (up to 50,000–60,000 men) and appropriate naval and air combat elements. All these forces should have the full range of capabilities necessary to undertake the most demanding crisis management tasks.
- Urge the Member States to provide the capabilities to deploy in full at this level within 60 days and within this to provide some smaller rapid response elements at very high readiness. We need to be able to sustain such a

deployment for at least a year. This will require further deployable forces (and supporting elements) at lower readiness for the initial force.¹¹

In trying to allay any possible fears that a separate European defense capability might undermine NATO and U.S. military links with Europe, the Joint Declaration stresses that "NATO remains the foundation of our collective defense ... We expect NATO and the EU to develop a close and confident relationship."¹²

At the European Summit in Helsinki on December 10–11, 1999, the European Council effectively adopted the goals outlined in the Anglo-French Joint Declaration. By the year 2003, the EU intends to have a multinational corps-level force with the necessary enhanced command and control, intelligence, logistic, and combat support capabilities for an autonomous European mission if NATO were not engaged. The focus of the proposed force was explicitly limited to include only humanitarian intervention, peacekeeping, and peacemaking missions. Again, the EU specifically noted that this force "does not imply the creation of a European army" that might act separately or in competition with NATO or the United States.¹³

In any event, although a "European option" provides a greater degree of political autonomy from NATO (and specifically the U.S.), it does not guarantee the political will to increase defense expenditures to a level sufficient to equip, train, transport, sustain, and complete a rapid response mission. It certainly will not be as technologically capable as the U.S., possibly resulting in a lesser degree of overmatch and higher casualties—both civilian and military. The fact that the European forces will be "dual tasked" between the European Rapid Reaction Force and NATO could hinder increased military interoperability amongst the NATO allies. European forces, which might otherwise be closely integrated within NATO, may inevitably find themselves concentrating their interoperability efforts purely within Europe to the detriment of the transatlantic alliance.

3. A Transatlantic Marketplace

The United States and Europe are currently at a crossroads with an enormous opportunity, primarily brought about by the circumstances of the military-related industrial base on each continent. After the end of the Cold War, the U.S. defense industrial base underwent a period of intense consolidation. Recognizing the benefits of

¹¹ Quoted from the "Joint Declaration by the British and French Governments on European Defence," November 25, 1999.

¹² Ibid.

¹³ European Presidency Conclusions from Helsinki, December 10–11, 1999.

the revolution in information and communications, U.S. defense consolidation reduced overall costs, fused research and development efforts, and combined technologies to provide larger product lines. The United States military equipment, software, and service markets are now dominated by a few very large defense companies—Lockheed Martin, Boeing, Raytheon and Northrop Grumman—and several second and third tier companies.

In due course, Europe's large state and privately owned defense companies embarked on the path toward consolidation across Europe's national boundaries in order to achieve a measure of parity with their expanded American counterparts. In 1999 and 2000, Europe saw the formation of two large multinational defense companies: the European Aeronautic Defence and Space Company (EADS), which comprises Daimler-Benz Aerospace of Germany, Aerospatiale of France, and CASA of Spain; and BAE Systems, based in the U.K. and created by the merger of British Aerospace and GEC Marconi.

Today, the U.S. and European governments, in coordination with industry, are trying to rationalize the transatlantic marketplace. In so doing, they are attempting to create the conditions that could allow greater and more extensive transatlantic cooperation. Of primary concern is the avoidance of a "Fortress Europe" versus a "Fortress America" situation. In order to prevent such a situation, U.S. and European government and industry are discussing the creation of a transatlantic marketplace that:

- Allows U.S. and European companies to more freely participate in cross-border technology transfers so as to create larger product lines and efficiencies
- Avoids duplication of major technology development efforts so that savings can be realized by U.S. and European governments
- Promotes standardization as a means of making NATO equipment and its forces more flexible and interoperable as well as avoiding the creation of "stovepiped" systems
- Provides a relaxation of export controls on defense items and technologies between the U.S. and its principal allies

To this end, the 17-point Defense Trade Security Initiative (DTSI) proposed by the United States in May 2000 begins to demonstrate America's commitment to helping its friends and allies overcome the capability gap. Its most important points include:

- The streamlining of export controls with revised licensing arrangements
- Broader authorization for the exchange of technical data vis-à-vis acquisitions, mergers, joint ventures, and teaming arrangements

- The extension of the International Traffic in Arms Regulations (ITAR) exemption to qualified countries
- A review and revision of the U.S. Munitions List in order to comport what is controlled by it with the Military Critical Technology List

As the NATO operation in Kosovo highlighted, there are many areas of mismatch between the United States and the other NATO allies, brought about mainly by the vast U.S. investment in the modern technologies since the Vietnam War. Nevertheless, the problem of developing interoperable forces that can respond cooperatively to the full spectrum of military conditions is made more tractable by a transatlantic marketplace that has increasingly become more conducive to the transfer of technology between U.S. and European defense companies. What is now required, however, is the political will to capitalize on this situation. How have the individual European countries responded to the changed circumstances of NATO and the heavy U.S. investment in the RMA? While certain countries such as the United Kingdom might be able to restructure their forces relatively easily, others such as France and Germany might find some of the necessary political compromises and budgetary commitments too much to bear.

B. THE CAPABILITY GAP AND SPECIFIC COUNTRIES

1. United Kingdom

There can be little doubt that the United Kingdom is one of America's closest allies. Since World War II the U.S. has shared a basic common outlook of the world with the U.K., and the government in London is usually the most willing to lend its political support and line up alongside Washington in dealing with international troublespots such as Iran, Iraq, and Libya. To be sure, there have been periods of bilateral mistrust and suspicion, but carefully nurtured ties at all the lower levels between the two countries have consistently remained strong.

The U.K. respects America's superpower status and will often try to be a helpful ally when its national interest dictates. When there is a conflict of interest, Great Britain is adept at working with the U.S. and, at the very least, the two governments can agree to disagree. When the U.S. is in conflict with the European Union over trade issues, Britain relishes its role as an honest broker. Great Britain's network of political, economic, military, industrial, and scientific connections in the U.S. are unparalleled and its privileged access to U.S. military technology is the envy of almost every other government.

The U.K. is a nuclear power and holds a seat as a permanent member of the United Nations Security Council. As a former colonial power and a leading member of NATO, Britain has recently found itself intervening, projecting power, or sending peacekeeping forces to numerous and scattered parts of the world. Over the past decade, British forces have found themselves serving in Bosnia, Kosovo, Cyprus, Georgia, Sierra Leone, East Timor, Iraq, and Kuwait.

One of the main concerns facing Britain today is budgetary. Throughout the 1980s, and particularly in the wake of the 1982 Falkland's War, Britain invested heavily in its armed forces to the detriment of other areas including nonmilitary research, the modernization of the telecommunications industry, and the maintenance of Britain's road and rail networks. During this period, Britain was also prone to reduced economic growth, prolonged recessions, and a slightly lower per capita income than some of its European counterparts that spent relatively less on defense, and some have attributed this relatively poor economic performance to Britain's overinvestment in defense.¹⁴ During the last Conservative government (1992–1997), budget debates focused on reaping the financial benefits of the peace dividend, i.e., reducing Britain's defense budget and placing the savings into the neglected areas mentioned above. Although the changed circumstances of the post-Cold War international security environment were recognized by the Tory leadership, no comprehensive analysis for restructuring Britain's armed forces to better meet these challenges was attempted.

One of the first tasks of the new Labour government of Tony Blair, therefore, was to initiate the Strategic Defense Review (SDR) of Britain's armed forces, which was completed in July 1998. Borrowing many ideas from the United States, the SDR was the British government's first real recognition of the RMA touted by its American counterpart. The SDR recognized that British forces needed to be swift and flexible. Jointness of the British services, improvement of sustainability, and the enhancement of logistical capabilities were some of the main recommendations. A recommendation to introduce "smart procurement" echoed the U.S. Revolution in Business Affairs—both altering the ways in which government conducts business.

¹⁴ Lutz Unterseher, "Europe's Armed Forces at the Millenium: A Case Study of Change in France, the United Kingdom, and Germany," Project on Defense Alternatives, Briefing Report #11, December 1999, p. 19.

Some key elements of the SDR include:

- The designation and training of selected service units as components of Joint Rapid Reaction Forces to provide more capable, more deployable and better supported Joint forces
- The formation of Joint Force 2000—a joint Royal Navy/Royal Air Force Harrier force
- The establishment of a Joint Helicopter Command, bringing together Royal Navy Commando, Army attack, and RAF support helicopters into a fleet of 400, consolidating all of Britain's battlefield helicopters except for those based on warships or those used for search and rescue operations
- The formation the Joint Rapier Training Unit, integrating RAF and Army low-level air defense capabilities

This new direction notwithstanding, the question remains as to how Britain will be able to implement these, and other changes, to its armed forces? Britain's defense expenditures are expected to show a slight increase in spending through 2004. The total expenditure on major equipment is planned to rise from about £6 billion in 2000/01 to £6.3 billion in 2001/02. However, as one expert observed: "The question remains whether the U.K. can, with a 1998 GDP of \$1.25 trillion—only two-thirds that of Germany and barely one-seventh that of the U.S.—adequately meet the requirements stemming from the multifaceted roles and commitments it proposes to undertake?"¹⁵

Britain's total planned defense expenditures for 1998–2003 are as follows:¹⁶

1998/1999 - \$37.4B	2001/2002 - \$36.7B
1999/2000 - \$34.6B	2002/2003 - \$37.8B
2000/2001 - \$35.9B	2003/2004 - \$39.0B

Figures shown at 1999 currency rate (\$1 = . £0.64)

If the projections through 2003 remain as planned, the British defense budget from 1998 to 2003, when adjusted for inflation (3.4% in 1998), will decrease in real terms. The Ministry of Defence's (MOD's) Long Term Costing (LTC) procedure provides budget estimates 10 years into the future and for the 2002–08 time period, the LTC assumes that the budget will remain nearly constant in real terms factoring in inflation. Thus, Britain's planned defense expenditures through 2003 do not appear to provide sufficient funding to significantly improve the capabilities of British forces vis-à-vis the

¹⁵ Ibid., p. 18.

¹⁶ Press Release by Gordon Brown, Chancellor of the Exchequer, July 18, 2000.

U.S., or provide increased interoperability with its allies. If Britain is to minimize the capability gap, the government will have to invest wisely, with little room for error given its budgetary constraints.

The U.K. has begun an ambitious program to replace and upgrade its fleet of strategic and tactical airlift aircraft. Boeing expects to finalize an agreement by the end of September 2000 that would allow the U.K. to lease four new C-17 heavy lift transport aircraft capable of forward area delivery. This lease will run for 7 years, with options for extension for 2 additional years. The planes are only an interim fix for the United Kingdom, however, as the U.K. has stated it will buy 25 of the Airbus A-400Ms (currently in development) for its long-term airlift needs.¹⁷ The A-400M is expected to be ready for delivery around 2007. The U.K. fully realized the need to upgrade its airlift capabilities following its experiences in the Kosovo conflict, as explained in an after-action MoD report entitled "Kosovo: Lessons from the Crisis." It noted: "During the Kosovo operation, we made considerable use of commercial strategic lift assets, and our current vulnerability and requirement for a strengthened national defence capability in this area was confirmed, particularly those forces designed to maintain flexibility and quick response."¹⁸

The British are pursuing a number of UAV programs designed to enhance their intelligence, surveillance, and reconnaissance capabilities. Future enhancements to the in-service Phoenix UAV are linked closely to MoD studies to develop operational requirements for a new family of UAVs for the British Army. These include a small UAV for use by battalion-sized units, designated Sender, and a bigger system for use by brigades and divisions, designated Spectator. According to the SDR, "Central to the ability of retaining a technological edge over potential adversaries is the ability to gather information about an opponent and use it to maximum effect. In military terms, the first aspect is our intelligence, surveillance, target acquisition, and reconnaissance capability." In this vein,

- Defense officials from the United States and the United Kingdom signed a letter of intent for a joint tactical UAV development program in October 1999. Work will consider the operational lessons learned in Kosovo and their applicability for future UAV requirements, with emphasis on linking with

¹⁷ Report of May 16, 2000, announcement by U.K. MoD, *Inside Defense*, June 16, 2000.

¹⁸ MoD Report, "Kosovo: Lessons from the Crisis," 2000, located on the World Wide Web at <http://www.kosovo.mod.uk/lessons/contents.htm>.

other intelligence; surveillance; reconnaissance; strike; and command, control, communication, computers and intelligence systems.

- Britain's MoD has chosen four companies to define and assess optimum systems solutions for the Sender tactical UAV program, which is planned to have intelligence, surveillance, target acquisition, and reconnaissance capabilities.

Britain has attempted to structure a long-range transition to greater use of PGMs as evidenced by its planned acquisition of 232 Eurofighter aircraft and plans to participate in the U.S. Joint Strike Fighter program. Britain's SDR stressed the need for PGMs and PGM-capable aircraft. "There will be an increasing premium on 'stand-off' precision missiles which can be launched at targets from long range."¹⁹ Examples of Britain's planned procurement of PGMs follow:

- The RAF plans to procure the Storm Shadow, a stand-off air-to-surface long-range cruise missile.
- In September 2000, the U.K. MoD awarded Raytheon Company a \$59.7 million contract to supply an undisclosed number of imaging infrared-guided AGM-65G2 Maverick air-to-surface missiles.
- 65 Tomahawk cruise missiles are scheduled to be delivered this year, at a total cost of \$300 million.
- Boeing's Joint Direct Attack Munition and Raytheon's Enhanced Paveway guidance kits are among the candidate systems currently under consideration to modernize the U.K.'s existing laser-guided bomb inventory.

The U.K. is planning to equip its forces with advanced, secure communications equipment. The British armed forces have embarked upon a comprehensive \$3.5 billion program to introduce the Bowman digital communications systems. The program is intended to provide secure and resilient communications for both voice and data transmission.

Britain, as America's closest ally, has attempted to most closely follow the U.S. model towards utilizing the developments in information systems and technologies that characterize the RMA. Through development and purchases of UAVs, PGMs, communications systems, and airlift capability, Britain is investing its sparse defense resources in areas that provide a force projection capability, although it is constrained by its limited resources. A strong U.S.-U.K. relationship will be critical for the U.K. to exploit the RMA.

¹⁹ Excerpt of Strategic Defence Review as quoted in Unterseher, pp. 26-27.

2. France

Like the United Kingdom, France is a former colonial power (primarily in Indochina, francophone Africa and the Middle East) with global interests. France is also a nuclear power in the NATO alliance and it retains a permanent seat on the United Nations Security Council. France, however, has had something of a prickly relationship with the United States vis-à-vis NATO since the late 1950s, eventually removing itself from NATO's integrated military structure in 1966. Where the U.K. linked its foreign, defense, and economic policies to the United States in a special partnership, France to a lesser degree over the past 30 years associated itself with Germany, even though Germany maintained very close, loyal ties to the U.S., both bilaterally and in the NATO context.

France has often assumed a leadership role in Europe and the European Union as political leverage when its relations with NATO or the U.S. had become cool. Concomitantly, France prefers to maintain a measure of political and military independence to guarantee itself "freedom of action" if and when the time comes for France alone, or in coordination with allies, to engage in a military conflict. This tradition of autonomy has tended to focus the French government on producing indigenous technologies so as not to be hostage or beholden to another power—particularly the United States, and particularly in the field of nuclear weaponry (including missile technology).

Prestige plays an important role in French foreign and defense policy, and its most recent assessment of the current state of the French armed services, the 1994 White Paper, clearly plays to this aspect of French thinking. The four traditional pillars of French strategic thinking—deterrence, prevention, projection, and protection—are prevalent throughout the document, and the structure of its forces reflected this.

During the Cold War, France placed a high value on "la dissuasion," or its ability to deter with nuclear weapons. Based on the *force de frappe*, or striking force, France prides itself on having constructed "home grown" nuclear weapons and delivery vehicles. Although France has eliminated its ground-based nuclear forces since the end of the Cold War, it still deploys significant sea and air-launched nuclear forces for which it is committed to maintaining, and even upgrading—a sign that France wishes to maintain its prestige based partly on the no-longer applicable premises of the Cold War. A similar case could be made for France's financially burdensome investment in its first nuclear powered aircraft carrier, the *Charles de Gaulle*.

Like Great Britain, France has actively sent its forces overseas for a variety of missions over the past decade, including Bosnia and Kosovo, Georgia, Lebanon, Sierra Leone, Chad, and West Africa. France retains a forward presence (projection) in the French communauté countries of Djibouti, Cote d'Ivoire, Gabon, Sengal, French Guyana, and the Antilles, among others. However, it is increasingly coming to realize that the expense of maintaining such an overseas presence is unduly burdensome on French resources.

Furthermore, French "protection" is guaranteed by very large standing forces as compared with the rest of Europe. The French armed forces in 1998 consisted of 358,800 uniformed personnel, 36% of which were conscript forces. Moreover, the Gendarmerie, France's domestic security forces, had 93,400 active members in 1998.²⁰ France's disproportionately large armed forces also consume precious French resources.

Formulated now over 6 years ago, the 1994 French White Paper highlighted the necessity for French participation in limited crises on a multilateral basis. Conventional forces were given a new role. As the White Paper pointed out,

The organization of the forces must be such as to make it possible to split them up into elementary cells which may be reassembled on demand, into coherent groups having all the capabilities of command, action, support and assistance required for intervention. The principle of modularity will be the condition for the efficiency of the entire organization.²¹

The French defense budget remains fixed to a level of Fr 185 billion through 2002 as required by the 1996 5-year spending bill, the "loi de programmation," passed by the French National Assembly. However, each year since 1996 has seen a small increase to the defense budget. Overall, the fiscal guidance provided for by the law will cause French military expenditures to shrink by nearly 10% in real terms between 1999 and 2002.

Projected defense expenditures by France are as follows:²²

- 1999 - \$29.5B
- 2000 - \$29.1B

²⁰ Unterseher, "Europe's Armed Forces at the Millenium," p. 6.

²¹ French White Paper quoted in Robbin F. Laird and Holger H. Mey, "The Revolution in Military Affairs: Allied Perspectives," McNair Paper 60, Institute for National Strategic Studies, National Defense University, Washington, D.C., April 1999.

²² *The Military Balance 1999-2000*.

- 2001 - \$28.73B estimated
- 2002 - \$28.73B estimated

Figures shown at 1999 currency rate (\$1= Fr 6.44)

France possesses a modest capability in satellite communications and surveillance. The French space surveillance capability is based upon the Helios 1A (a satellite for optical reconnaissance), was launched in 1997 as part of a joint defense program developed by France (79%), Italy (14%), and Spain (7%). Helios 1B was launched in December 1999 and is France's second surveillance satellite. France has also embarked upon the development of a second-generation system, Helios 2, designed to ensure continuity of service with the Helios 1 system, with significantly enhanced performance (resolution, access delay, day/night capability). Launch of the first satellite is scheduled for the beginning of 2003. The French radar satellite program, Horus, has been postponed.

In June 2000, the French and German governments announced that they plan to acquire the Airbus Military Company's A-400M as a replacement for their aging military transport fleets, according to a June 9 Airbus press statement. France has agreed to purchase 50 of the aircraft, while Germany is committed to 73 aircraft. The planned procurement of the A-400M finalizes the European Staff Requirement, which is a pan-European agreement to meet the future airlift requirements of Britain, France, Germany, Italy, Spain, Belgium, and Turkey.

The bulk of the future French Air Force's 300 combat aircraft will consist of Rafale multi-role aircraft, which are as expensive as the Eurofighter but somewhat less capable. The French government has ordered a total of 61 aircraft to be delivered through 2005. The French Air Force intends to acquire a total of 139 Rafale B-type and 95 Rafale C-type aircraft, while the French Navy plans to acquire 60 Rafale M-type aircraft. The Rafale will be able to utilize a number of precision-guided munitions, including the 880-pound Matra BLG400 laser-guided bomb.

Airspace control will be conducted by the mobile elements of the future air operation command and conduct system and by airborne detection systems. France already has in service the helicopter-based Horizon system for airborne ground surveillance. The Navy also plans to procure three U.S. Hawkeye early warning aircraft.

France has actively developed and procured UAV systems. The Fox UAV series is offered in a variety of versions, ranging from a reconnaissance version to an electronic countermeasures version. France also utilizes a low-cost, off-the-shelf UAV, the

Crecerelle. Its mission is typically night and day localization of targets performed by the sensors which include a panoramic video camera, a high definition camera, and a high definition infrared analyser. In addition to the Crecerelle, the French company Sagem has teamed with General Dynamics to produce the Horus UAV, which is based on the U.S. UAV, Predator.

Overall, the French military continues to be constrained by a fixed budgetary ceiling of Fr 185 billion, which severely hinders the military's ability to develop and procure the military technologies necessary to increase the capabilities of French forces. France continues to invest a disproportionately high amount of its limited resources in developing indigenous prestige systems, namely a new aircraft carrier and a robust nuclear force. The burden of maintaining large, conscript-based armed forces also weighs heavily on France's ability to develop and procure those technologies that will be necessary to effectively contribute to a future coalition force.

3. Germany

Germany is a country that in many ways remains hostage to its history. The postwar architect of Germany's recovery from the Second World War was Konrad Adenauer, who recognized that a German *Mittleuropa* could be achieved only through peaceful means, and not through force of arms as two previous generations of German leaders had attempted. During and following Germany's postwar recovery, Adenauer led Germany into NATO in 1955, the European Economic Community in 1957, and other European institutions and organizations in order to instill confidence with its friends and allies that Germany was ready to play a contributing, peaceful, and stabilizing role in Europe. Germany's self-restraining foreign and defense policy therefore was cast through the prism of European organizations, building support within them in order to advance its core national interests so as to appear nonthreatening.

During the Cold War, all combat elements of the German Bundeswehr were subordinated to, and fully integrated into, NATO, providing the troop-intensive backbone of the West's defenses against the forces of the Eastern bloc. At the end of the Cold War, with the removal of its primary threat from the East, Germany dramatically reduced its defense budget -- more so than any of its allies. West Germany spent \$50.2 billion on defense in 1985, compared with \$33.4 billion in 1997—an overall reduction of one-

third.²³ Germany's generous welfare system and the monumental task of re-unification have made any sort of increase of the defense budget a highly contentious issue with the German public.

With the end of the Cold War, we are now seeing certain strongly held Cold War policies of Germany, particularly regarding German capabilities for power projection abroad, beginning to be reexamined. There remains a significant and vocal element in the German populace that believes it is inappropriate, given its history, for Germany to commit its forces beyond the country's boundaries. During the 1990–1991 Gulf War, for example, Germany did not commit any troops to the coalition forces. These attitudes, however, may be changing, albeit very slowly. After many public debates, Germany contributed 4,000 troops to the NATO peacekeeping operation in Bosnia, and later provided reconnaissance aircraft during the NATO bombing operation in Kosovo, as well as 8,000 peacekeepers after the cease-fire. Notwithstanding these incremental changes, however, Germany's continued overall reluctance to play a major role in out-of-area operations could significantly retard efforts by the German government to modernize its forces or make them more interoperable with those from the rest of NATO.

The Bundeswehr, ever since the end of the Cold War, has been very reluctant to change. Having been focused for the past half century on fighting a traditional defensive battle on its territory, each of the Services in the Bundeswehr has maintained a "traditional" outlook in the way battle and crisis management is perceived and the way military forces are applied. Interaction amongst the Services is very limited, and it appears likely to remain so in the future. The latest review of the German armed forces therefore is commendable for recognizing the need for reorganization for new missions. The May 2000 report "The Bundeswehr—Advancing Steadily into the 21st Century" outlines new capabilities expected of the German armed forces, including greater cooperation with allies and participation in multinational and joint operations, "notably with regard to the interoperability of the command and control organisation and facilities," as well as greater mobility, flexibility, and sustainability.²⁴

²³ Unterseher, p. 30.

²⁴ Report by the Federal Minister of Defence, "The Bundeswehr—Advancing Steadily into the 21st Century", May 23, 2000.

The main priorities of the Bundeswehr outlined in the May report call for the slow reconfiguration of a heavily conscript military to one which:

- Improves strategic deployability
- Acquires spaceborne reconnaissance
- Fields high-performance, compatible communication, command and control facilities to create greater interoperability and a joint and combined system network
- Reduces the German stocks of heavy weapons systems and platforms, while improving stand-off and precision capabilities
- Procures advanced systems to counter new threats such as drones and missiles
- Improves mobile and logistic support operations

However, the German government's stated commitment to build forces utilizing RMA technologies remains problematic given Germany's continued reluctance to raise defense expenditures. Projected German defense budgets are as follows:²⁵

1999 - \$24.7B

2000 - \$23.6B

2001 - \$23.3 B est.

2002 - \$22.9B est.

Figures shown at 1999 currency rate (\$1 = DM 1.92)

Moreover, Defense Minister Rudolf Scharping announced in June 2000 that Germany's defense budget will be cut by 2.5% between 2000 and 2003. This follows a decline of 48% in procurement and R&D from DM 12 billion in 1987 to DM 6.1 billion in 1995 (1994 prices).

Given the rapid decline of Germany's defense budget, especially in procurement, with no foreseeable increase, Germany will be hard pressed to transform its military in accordance the Defense Ministry's most recent review of its forces. Compounding this problem is the difficulty posed by the rapid obsolescence of even new weapons systems. Germany (and its European allies) recognizes that platforms and systems must be built with inherent growth potential and that modular systems are the way to go. By the same token, weapons systems need to be more flexible and versatile. The Taurus, a modular

²⁵ Unterseher, p. 30

stand-off weapon, is an example of this; it will have a range of 350 kilometers and a radar/IR sensor and is expected to be fielded by 2003.

Owing to budgetary constraints, Germany is projected to be capable of purchasing only about 160 Eurofighters through 2015. The Eurofighter can carry a range of air-to-surface weapons, including Alenia Marconi/Boeing Brimstone and DWS 37 anti-armor weapons and many different types of GPS and laser-guided bombs. The decision by Germany to purchase 73 Airbus A-400M airlift aircraft will improve Germany's ability to transport its troops and materiel out-of-theater. Germany's current transport, the Transall C-160, is smaller and less capable.

Germany is focusing on high-altitude and endurance systems for reconnaissance and surveillance of both large areas and point targets. UAVs will also have a role in airspace management and as "air stationary" platforms for communication relays. German Droner UAVs were used to conduct battle damage assessments and to detect emerging targets in Kosovo. The German CL-289 drone provides good imagery but requires extensive mission planning, is unresponsive to cueing, and has a long lag time in retrieving mission results. The Brevel Kleinfluggerät Zielortung (KZO) of the German forces is a reconnaissance and target location UAV being developed by GIE Eurodrone under contract from the German and French defense ministries. Its main missions are to provide reconnaissance data and to detect and provide accurate position data on enemy targets for the artillery.

Germany is also conducting field-testing of the UAV drone Mücke, with intended introduction into the German army in 2005. The Taifun is another system under development that will be employed on corps level against key targets in the depth of hostile territory. The German Navy is also developing the Seamos UAV. The primary tasks of the UAV are comprehensive reconnaissance and target acquisition. It is planned to enter service in the year 2005.

Germany faces a difficult challenge in reconciling its defense goals with severe budget constraints and contentious political choices. While the German government intends to reduce the size of the armed forces and create a professional corps capable of rapid, interoperable, and joint deployments to "out-of-area" crises, the German defense budget does not appear to provide adequate resources for such a modernization. Indeed, Germany's attempt at harnessing RMA technologies will likely be sporadic, restricting the ability of Germany's military to shape a coherent, joint force. Cost savings will eventually be achieved by reducing the size of Germany's conscript force, but the failure

to invest adequately in RMA technologies today will likely necessitate an even larger investment in the relevant technologies in the future.

C. THE FUTURE OF THE TRANSATLANTIC CAPABILITY GAP

To say that there is a capability gap between the United States and its European allies is to state the obvious. The U.S. military continues to lead in the development of RMA technologies and their integration into its force structure. As clearly evidenced in the air war over Kosovo, U.S. domination in the areas of airlift, precision-guided munitions, information technologies and UAVs resulted in U.S. forces dominating Yugoslav forces, providing a major contribution in their eventual withdrawal from Kosovo without any U.S. casualties. The U.S. military recognizes the need to fully utilize the benefits of advanced technologies and information systems and to increase its capabilities in the areas of strategic airlift, UAV capabilities, and inventories of PGMs.

The RMA, however, is not simply a “shopping list” of systems to be procured. The RMA is a concept, embraced by U.S. military doctrine for the post-Cold War era, resulting in an all-volunteer joint force capable of a wide variety of missions and an appreciation for the value of the synergistic effect of systems that allow for real-time decision making.

Nevertheless, the technologies that underscore the RMA—command, control, communications, intelligence, and information systems—offer the British, French, and German armed forces the ability and opportunity to transform themselves from a collection of separate Services into a more joint and combined, interoperable force capable of greater power projection. Rapid advances in commercial-off-the-shelf information technologies and communications equipment can increase the capabilities of European forces, both independently and within a combined force structure. There can be little doubt that Europe will be able to field a 50,000- to 60,000-soldier Rapid Reaction Force from its nearly 2 million strong combined armed forces within 5 years.²⁶ However, the EU must still consider budgetary constraints, the need to acquire significant information technologies, entrenched societal pressures, and a massive reorganization before it can successfully field a force that embraces the RMA concept, capable of joint and combined activity out-of-theater.

²⁶ At the September 22, 2000, EU meeting at Ecouen, France, EU defense ministers agreed that the size of the European Rapid Reaction (Intervention) Force should be increased to include 80,000 troops, 300 to 350 fighter aircraft, and 80 ships. See *Defense News*, October 2, 2000, Vol. 15, No. 39, p. 2.

While the U.K. armed forces will likely continue to be financially hampered and forced to "get more from less," the outlook may not be as bleak at it first appears. The SDR, while ambitious, does set the country along a path that facilitates interoperability between its forces and those of its most valuable partner, the United States. As in the past, British diplomacy and good, stable relations with Washington will continue to be as critical as ever. Building on their earlier Memorandum of Understanding, the U.S. and U.K. are currently negotiating a bilateral agreement that removes several export control barriers, allowing for a freer flow of technology. Britain appears well poised to transform its forces so that they can contribute small, yet significant, resources in future combined operations.

Compared with Great Britain, France and Germany are only slowly embracing the concepts envisioned by the RMA. Budgetary constraints, a prestige-based procurement policy, and an independent outlook regarding the basis for its foreign and defense policies to some extent deny France the opportunity to fully exploit the transatlantic marketplace and the capabilities provided by the RMA. On the other hand, while Germany's leadership has recognized the positive benefits of the RMA concept, as evidenced by their most recent military reorganization, German domestic politics (reunification, the peace dividend, and German history) is determining the pace of transition for its armed forces. Change, however, may come too little and too late.

With the U.S. investing and procuring so much in RMA technologies, it is unrealistic to believe that any country, including the U.K., could develop forces that mirror aspects of U.S. capabilities in the near to mid-future (2- to 10-year timeframe). Given the growing disparity with its major NATO allies, the U.S. is encouraging the Europeans to concentrate on developing forces that are interoperable with those of the United States and, to the extent possible, take advantage of the momentum generated by the U.S. efforts to incorporate the RMA into its doctrine. The Europeans, for their part, may yet demonstrate that their stated policies are not just empty rhetoric. It appears that Europe's civilian leaders now recognize the importance of closing the capability gap. The question arises whether they have the political will to elevate their current investment in RMA technologies and impart a sense of urgency to their publics. Little is currently being done in this regard, and the gap will likely continue to grow wider. Nevertheless, the U.S. continues to look for new opportunities, through NATO and the growing transatlantic marketplace, to work closely with the Europeans.

D. POLICY QUESTIONS

The current initiative to deal with the transatlantic capability gap that is being pursued in NATO is the Defense Capabilities Initiative (DCI), launched at the 50th NATO Anniversary summit in Washington in April 1999. The stated objective of the DCI is to improve defense capabilities to guarantee the effectiveness of future multinational operations, with particular emphasis on improving interoperability among Alliance forces. Broad in scope and pertaining specifically to NATO concerns, the DCI does not address some of the hard-core policy issues facing the U.S. and European governments.

Below are several policy questions that may be useful in stimulating debate about the transatlantic capability gap at the government-to-government level. Hopefully these questions will provide a starting point for U.S. and European diplomats to speak frankly, openly, and, most of all, constructively, about what needs to be done to address this issue:

- What is the U.S. national interest in bridging the capabilities gap with the Europeans? Where are we heading with regard to defense modernization, can the Europeans follow our lead, and/or can complementary forces and technologies be developed on both sides of the Atlantic?
- Is the U.S. committed to coalition warfare? If so, to what extent is it committed to sharing responsibilities with the Europeans? Will future operations be conducted in a manner similar to Operation Allied Force (with the U.S. supplying high-tech forces and Europeans supplying low-tech forces during the battle and the majority of ground forces afterwards?)
- What will be the relationship between NATO and the European Rapid Reaction Force? Will there be excessive political competition between the two organizations? Is European "dual tasking" detrimental to NATO?
- Is the U.S. willing to further open its defense industry to the Europeans, perhaps risking undesired transfers of technology and military capabilities to unintended countries?
- To what extent does the U.S. want to promote pure interoperability among allied forces and systems, as opposed to commonality of systems or alliance owned systems (example: NATO AGS)?
- What are the political implications of the U.S. sharing its more advanced technologies with its NATO allies? How should such a policy be implemented? Should there be different levels of sharing, perhaps rewarding some and prejudicing others? Would such a policy eventually weaken NATO cohesion?
- Is it overly optimistic to believe that the U.S. can enjoy the same relations with France and Germany (as well as other NATO allies) as it does with the

U.K.? Can bilateral agreements, such as that being worked out between the U.S. and U.K. to remove export control barriers between the two, be similarly negotiated between the U.S. and its other European allies?

- Should a U.S.-European "division of labor" for research and development, procurement, training, and logistics support be considered an option for bridging the gap, and can the European defense budgets support such an approach?
- What is a realistic approach for the U.K., France, and Germany to bridge the transatlantic capability gap vis-à-vis the U.S., given their continued domestic political problems with substantial increases in defense spending? What alliance operational concepts are most consonant with these political realities?

GLOSSARY

AAN	Army After Next
AEF	Aerospace Expeditionary Force
C3I	Command, Control, Communications and Intelligence
C4ISR	Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance
DCI	Defense Capabilities Initiative
DoD	Department of Defense
DTSI	Defense Trade Security Initiative
EADS	European Aeronautic Defence and Space Company
EU	European Union
FY	Fiscal Year
FYDP	Future Years Defense Plan
GIG	Global Information Grid
ICBMs	Intercontinental Ballistic Missiles
ITAR	International Traffic in Arms Regulations
JTIDS/MIDS	Joint Tactical Information Distribution System/Multifunctional Information Distribution System
LRPS	Long-Range Precision Strike

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22203-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE October 2000		3. REPORT TYPE AND DATES COVERED Final	
4. TITLE AND SUBTITLE The Transatlantic Capability Gap: A General Assessment				5. FUNDING NUMBERS Independent Research Project	
6. AUTHOR(s) William E. Cralley, Charles W. Dyke, Constantine Pagedas					
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Institute for Defense Analyses 1801 N. Beauregard Street Alexandria, VA 22311				8. PERFORMING ORGANIZATION REPORT NUMBER IDA Document D-2512	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) Institute for Defense Analyses 1801 N. Beauregard Street Alexandria, VA 22311				10. SPONSORING/MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES					
12a. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited.				12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words) The NATO alliance worked through and overcame many difficult internal conflicts throughout the Cold War and survived—testament to the durability and political flexibility of its members. Evolutionary growing pains in NATO are nothing new. But in the late 1990s, a number of ideas, policies, circumstances, and situations arose that radically altered the basic outlook and premise of the Alliance. With Russia no longer posing a military threat to Europe, NATO now faces a new challenge brought to the fore by Operation Allied Force in Kosovo in the spring of 1999—the so-called capability gap. This paper outlines the current U.S. military capability, highlights major European policies aimed at overcoming the capability gap, and describes the current transatlantic business conditions that could play a critical role in helping to “bridge the gap.”					
14. SUBJECT TERMS NATO, Kosovo, transatlantic capability gap				15. NUMBER OF PAGES 38	
				16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified		20. LIMITATION OF ABSTRACT UL	